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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/789,458

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Makoto Ohhira

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5178

7590

03/23/2007

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EXAMINER

VU, PHU

ART UNIT

PAPER NUMBER

2871

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

03/23/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

10/789,458

Applicant(s)

OHHIRA, MAKOTO ET AL.

Examiner

Phu Vu

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2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 December 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Arguments***

Applicant's arguments with respect to claims 1-12 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

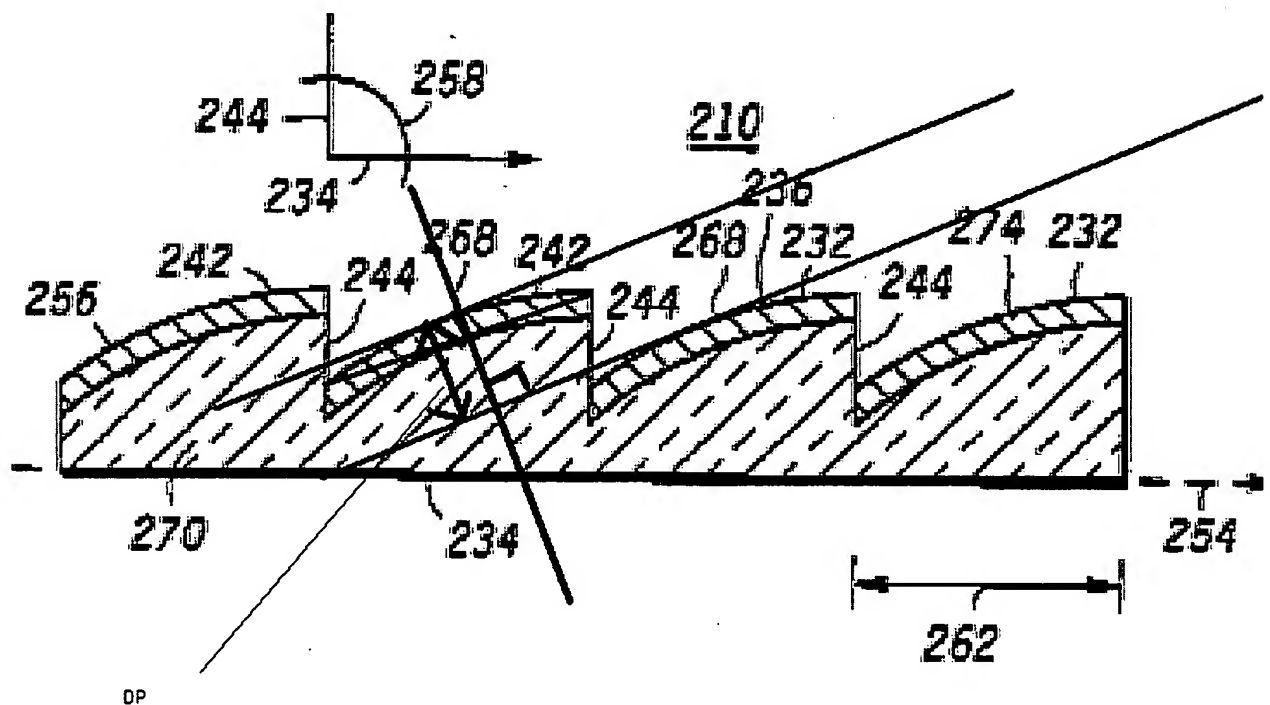
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claims 1 –4 and 6-12 are rejected under 35 U.S.C. 102(b) as anticipated by Atkins et al. US Patent No. 6285425.**

**Regarding claims 1-3,** Atkins teaches a reflector with a plurality of unit reflecting portions disposed parallel to a predetermined plane (fig. 7 element 270), wherein each unit reflection portions has a reflection face for reflecting incident light in a direction different from that of regular reflection light of said predetermined plane, a first reflection face arranged in a first unit reflecting portion comprising a first tangential plane tangent to the first reflecting face at a reference point on the first reflecting face; and a second reflection face arranged in a second reflecting portion adjacent to the first unit reflection portion comprising a second tangential plane parallel to the first tangential plane and tangent to the second reflection face wherein the shortest distance or an average

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shortest distance between a first reference point and second tangential plane is half or more a coherent length of sunlight (see fig. 7 copied below). The distance denoted  $D_p$  is presented below. Akins discloses distance 262 is equal to 100 microns to 200 microns (see column 8 lines 9-31). Applicant's arguments disclose a  $L_c$  values being approximately 3 microns. Therefore distance  $D_p$  must be greater than  $L_c/2$  which would be roughly 1.5 microns since Akins discloses a distance 262 to be between 100 and 200 microns since  $D_p$  is between  $1/4^{\text{th}}$  to  $1/2$  that of length 262 which are easily over 1.5 microns. Point 268 is considered the reference point which dominates the light intensity from the first reflection face. **Regarding claim 12**, this reference point also appears to coincide with a center of gravity point of the reflection face.



**Regarding claim 4**, the reference teaches reflector according to claim 3, wherein the distance between said first tangential plane and said second tangential plane is set to 80 micrometers or less. As previously stated since the placement of the points is arbitrary points where the tangent is closest to vertical will have a distance between tangential planes to be maximal in this case 100 micrometers max (which is the distance between two selected points as stated in claim 1) however, points where the tangential is horizontal will be significantly less. Since applicant has provided no limitation of the reference point than this limitation will be met for the set of points where the tangential is close to horizontal (see fig. 7).

**Regarding claim 6**, the reference teaches the reflector according to claim 5, wherein said plural unit reflecting portions are arranged such that directions for maximizing the intensity of the reflection light reflected by said reflection face cross each other in a predetermined position. Since applicant does not specify the predetermined position the crossing position of the reference is considered the predetermined position and this limitation is met or any specific structure that this limitation implies this limitation is met as the applicant does not supply any structure associated the reflector of claim 3 is considered to meet this limitation as applicant does not indicate any structural difference between the two.

**Regarding claim 7**, The reflector according to claim 6, wherein said plural unit reflecting portions are arranged such that diffusion reflection lights reflected by said reflection face cross each other in a predetermined area. Since applicant does not specify the predetermined area the area in the reference is considered where diffusion

reflection lights cross of the reference. Applicant does not provide any structural difference between this structure and the structure according to claim 3.

**Regarding claim 8**, the reflector according to claim 3, wherein said reflector has a curved shape, and said reference point is determined as one of a point at which a point orthogonally projected onto said predetermined plane is conformed to the center point of gravity of a projection figure caused when said unit reflecting portion is orthogonally projected onto said predetermined plane, a point at which a normal line vector calculated at one point on said reflection face is similarly conformed to an average vector of the normal line vector calculated at each point, and a point for maximizing the distance from a line segment connecting minimum and maximum points in the distance with respect to said predetermined plane on said reflection face to said reflection face. The reference point can be considered a point at which a point orthogonally projected onto said predetermined plane is conformed to the center point of gravity of a projection figure caused when said unit reflecting portion is orthogonally projected onto said predetermined plane thus (see fig. 7 and fig. 8 which shows another view of fig. 7).

**Regarding claim 9**, the reference teaches a display device having a reflection member and performing display by reflecting light incident from the exterior on the reflection member, wherein this reflection member is constructed by the reflector (see column 2 lines 44-46 and also see claim 4).

**Regarding claim 10**, than electronic apparatus characterized in that the display device according to claim 9 is used as a display (see column 2 lines 44-46 and also see claim 4)..

**Regarding claim 11**, Atkins teaches a method of light reflecting comprising steps of: projecting incident light from a direction of regular reflection of a predetermined plane and reflecting the incident light in a direction different from the direction of regular reflection of the predetermined plane by using a reflector the reflector comprising: a reflector with a plurality of unit reflecting portions disposed parallel to a predetermined plane (fig. 7 element 270), wherein each unit reflection portions has a reflection face for reflecting incident light in a direction different from that of regular reflection light of said predetermined plane, a first reflection face arranged in a first unit reflecting portion comprising a first tangential plane tangent to the first reflecting face at a reference point on the first reflecting face; and a second reflection face arranged in a second reflecting portion adjacent to the first unit reflection portion comprising a second tangential plane parallel to the first tangential plane and tangent to the second reflection face wherein the shortest distance or an average shortest distance between a first reference point and second tangential plane is half or more a coherent length of sunlight (see fig. 7). The distance denoted  $D_p$  is presented below. Akins discloses distance 262 is equal to 100 microns to 200 microns (see column 8 lines 9-31). Applicant's arguments disclose a  $L_c$  values being approximately 3 microns. Therefore distance  $D_p$  must be greater than  $L_c/2$  which would be roughly 1.5 microns since Akins discloses a distance 262 to be between 100 and 200 microns since  $D_p$  is between  $1/4^{th}$  to  $1/2$  that of length

262 which are easily over 1.5 microns. Point 268 is considered the reference point which dominates the light intensity from the first reflection face

***Claim Rejections - 35 USC § 103***

**Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Atkins et al. US Patent No. 6285425.**

**Regarding claim 5**, the reference teaches all the limitations of claim 5 except wherein said reflection face has a curved shape, and the average value of an angle formed by said predetermined plane and a plane perpendicular to an average vector of a normal line vector calculated at each point on said curved face ranges from 5 degrees or more to 15 degrees or less. The reference shows these angles to encompass a range that appears to be overlap the claimed range. The reference does not specify any specific angles however the references angles which correspond to alpha in the applicants specification being 5-15 degrees as in fig. 9 appear to include angles above and below the claimed range in addition to the claimed range (see fig. 7 angles made by the tangential to the reflectors 242 to the horizontal plane) and narrowing it can provide a narrow range reflection. Thus it would be obvious to one of ordinary skill in the art to apply a range of 5 degrees or more to 15 degrees or less limit reflection angles of the display. Moreover, The MPEP section 2144.05 [R-1] states In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a prima facie case of obviousness exists. In re Wertheim, 541 F.2d 257, 191 USPQ 90 (CCPA 1976).

***Conclusion***



Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phu Vu whose telephone number is (571)-272-1562. The examiner can normally be reached on 8AM-5PM M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on (571)-272-1787. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Phu Vu  
Examiner  
AU2871

*Andrew Schelto*  
ANDREW SCHERTO  
PATENT EXAMINER